

**What claims are claimed:**

1. Transmittance detection and a chromatographic strip are used together in a single or multi-step test to quantitate analytes in biological fluid.
2. The detection principle used in combination with a chromatographic strip is not limited to transmittance; fluorescence, magnetic field and chemiluminescence, as well as electrochemistry detection principles are extended.
3. Various materials having light transmission properties can be used for making beads or porous materials to fill the detection cell and the reference cell of the chromatographic test strip.
4. The chemical reagent, affinity reagent, antibody, antigen or other proteins are bound to the beads or porous materials by simple absorption, covalent or non-covalent chemical binding.
5. The labels used in the testing system can be direct detectable or visible colored particles, metallic sols (colloidal gold), dye sols, charged particles, magnetic particle, fluorophors and colored latex particle. Indirect labels, such as enzymes (alkaline phosphatase and horse radish peroxidase etc.) can be used in combination with enzyme substrates.
6. Various chemical reactions, such as analyte, substrate reaction, enzyme substrate reaction, analyte affinity binding can be used with this strip format.
7. Various immunoassays, such as sandwich assay, competitive assay, and homogenous assay can be conducted with this strip format.
8. The strip can be horizontal, vertical, or any other position corresponding to the detection system.

9 The strip and the cells can be in any shape and size to accommodate the requirements of any particular test.

10 The sample flow passing through the strip can be generated by gravity, capillary action, wicking, vacuum pump, peristaltic pump or other means.